

AMENDMENTS TO THE CLAIMS

The following Listing of Claims replaces all prior versions, and listings, of claims in the present application.

Listing of Claims:

1. (Previously Presented) A breathing apparatus comprising:

a tank adapted to contain air under pressure operatively associated with a regulator to enable delivery of said pressurized air to a user of said apparatus during a clean air mode;

a filter system adapted to enable ambient air to pass through a filter medium to deliver filtered air to said user of said apparatus during a filtered air mode, the filter medium having a mesh that is sufficient to one of trap solid particles in ambient air and enable ambient air in need of cleaning to have a residence time in contact with media that is sufficient to decontaminate contaminating vapors and gases from said ambient air to form clean air;

means for moving said ambient air into said filter system, through said filter medium in said filter system and thence into operative relationship with a user of the apparatus during said filtered air mode;

a valve assembly comprising a first valve associated with said tank and a second valve associated with said filter system, the valve assembly adapted to control the flow of cleaned air from said filter system in said filtered mode and pressurized air from said tank in said clean air mode, such that said pressurized air supplied from said tank opens said first valve and closes said second valve to actuate said valve assembly from the filtered mode to the clean air mode while continuously providing a supply of breathable air to the user; and

a first switch operably coupled to the tank and selectively enabling switching between the clean air mode and the filtered air mode.

2. (Previously Presented) An apparatus as claimed in claim 1 further comprising plural filter elements.

3. (Previously Presented) An apparatus as claimed in claim 1 further comprising a face mask adapted to tightly fit a user.

4. (Previously Presented) An apparatus as claimed in claim 3 wherein the valve assembly includes a first conduit between said tank and said face mask, a second conduit between said filter system and said face mask, and one or more valves operatively associated with said first and second conduits adapted to control the flow of cleaned air from said filter system or air from said tank to said user.

5. (Canceled)

6. (Previously Presented) An apparatus as claimed in claim 3, further comprising a one way exhaust valve operatively associated with said face mask.

7. (Previously Presented) An apparatus as claimed in claim 19, wherein the second switch is user actuatable.

8. (Previously Presented) An apparatus as claimed in claim 19, wherein the second switch is coupled to the valve assembly to energize the moving means when the valve assembly is set to control the flow of cleaned air from the filter system and to de-energize the means for moving when the valve assembly is set to control pressurized air from the pressure tank.

9. (Previously Presented) A breathing apparatus comprising:

a tank adapted to contain air under pressure;

a regulator coupled to the tank to enable delivery of said pressurized air to a user of the apparatus in a clean air mode;

a filter system adapted to enable ambient air to pass through a filter medium;

a powered air flow unit that forces ambient air into said filter system, and through said filter medium to deliver filtered air into operative relationship with said user of the apparatus in a filtered air mode;

a valve assembly comprising a first valve associated with said tank and a second valve associated with said filter system, the valve assembly operatively connected to said tank such that the pressurized air from said tank opens said first valve and closes said second valve to move the valve assembly from the filtered air mode to the clean air mode while continuously providing a supply of breathable air to the user; and

a first switch operably connected to the tank and selectively enabling switching between the clean air mode and the filtered air mode.

10. (Previously Presented) The breathing apparatus of claim 9, further including a face mask adapted to tightly fit a user fluidly coupled to the valve assembly.

11. (Previously Presented) The breathing apparatus of claim 10, wherein the filter medium includes a mesh that is sufficient to trap solid particles in ambient air.

12. (Previously Presented) The breathing apparatus of claim 10, wherein the filter medium includes a media that is sufficient to decontaminate contaminating vapors and gases from ambient air.

13. (Previously Presented) The breathing apparatus of claim 10, wherein the valve assembly includes a first conduit disposed between said tank and said face mask, a second conduit disposed between said filter assembly and said face mask, and one or more valves operatively associated with said first and second conduits to control the flow of cleaned air from said filter assembly or air from said tank to said face mask.

14. (Previously Presented) The breathing apparatus of claim 10, wherein the filter medium includes plural filter elements.

15. (Previously Presented) The breathing apparatus of claim 10, further comprising a one way exhaust valve operatively associated with said face mask.

16. (Previously Presented) The breathing apparatus of claim 22, wherein the second switch is coupled to the valve assembly to energize the powered air flow unit when the valve assembly controls the flow of cleaned air from the filter system and to de-energize the powered air flow unit when the valve assembly controls pressurized air from the pressure tank.

17. (Previously Presented) The breathing apparatus of claim 4, wherein the one or more valves of the valve assembly comprises a valve operatively connected to said second conduit such that said pressurized air supplied from said tank during said clean air mode engages and closes said valve.

18. (Previously Presented) The breathing apparatus of claim 4, wherein said first conduit is connected directly between said regulator and said face mask and said second conduit is connected directly between said filter system and said face mask.

19. (Previously Presented) The breathing apparatus of claim 1, further comprising a second switch associated with the means for moving and coupled to the valve assembly, the second switch adapted to control energization of the means for moving in conjunction with operation of the valve assembly.

20. (Previously Presented) The breathing apparatus of claim 13, wherein the one or more valves of the valve assembly comprises a valve operatively connected to said second conduit such that said pressurized air supplied from said tank during said clean air mode engages and closes said valve.

21. (Previously Presented) The breathing apparatus of claim 13, wherein said first conduit is connected directly between said regulator and said face mask and said second conduit is connected directly between said filter assembly and said face mask.

22. (Previously Presented) The breathing apparatus of claim 9, further comprising a second switch associated with the powered air flow unit, the second switch adapted to control energization of the powered air flow unit in conjunction with the operation of the valve assembly.

23. (Previously Presented) The breathing apparatus of claim 1, wherein the first switch comprises a manually operable valve of the regulator.

24. (Previously Presented) The breathing apparatus of claim 9, wherein the first switch comprises a manually operable valve of the regulator.

25. (Previously Presented) The breathing apparatus of claim 1, wherein the pressurized air from said tank overcomes the ambient air from the filter system to close the second valve.

26. (Previously Presented) The breathing apparatus of claim 9, wherein the pressurized air from said tank overcomes the ambient air from the filter system to close the second valve.

27. (Previously Presented) The breathing apparatus of claim 8, wherein the second switch de-energizes the means for moving after the pressurized air from said tank closes the second valve such that a user is simultaneously supplied with pressurized air from said tank and ambient air from said filter system during the actuation of the valve assembly from the filtered air mode to the clean air mode.

28. (Previously Presented) The breathing apparatus of claim 16, wherein the second switch de-energizes the powered air flow unit after the pressurized air from said tank closes the second valve such that a user is simultaneously supplied with pressurized air from said tank and ambient air from said filter system during the actuation of the valve assembly from the filtered air mode to the clean air mode.

29. (New) A breathing apparatus comprising:

a tank adapted to contain air under pressure operatively associated with a regulator to enable delivery of said pressurized air to a user of said apparatus during a clean air mode;

a filter system adapted to enable ambient air to pass through a filter medium to deliver filtered air to said user of said apparatus during a filtered air mode, the filter medium having a mesh that is sufficient to trap solid particles in ambient air and enable ambient air in need of cleaning to have a residence time in contact with media that is sufficient to decontaminate contaminating vapors and gases from said ambient air to form clean air;

means for moving said ambient air into said filter system, through said filter medium in said filter system and thence into operative relationship with a user of the apparatus during said filtered air mode;

a valve assembly comprising a first valve associated with said tank and a second valve associated with said filter system, the valve assembly adapted to control the flow of cleaned air from said filter system in said filtered mode and pressurized air from said tank in said clean air mode; and

a flow path defined between the tank and valve assembly, the regulator being disposed between the tank and valve assembly along the flow path and reducing air pressure of the pressurized air to a resultant air pressure, such that the resultant air pressure opens said first valve and closes said second valve to actuate said valve assembly from the filtered mode to the clean air mode while continuously providing a supply of breathable air to the user.